Policy For Renovation, Modernisation, Uprating and Life Extension (RMU&LE) of Hydroelectric Projects on Lease, Renovate, Operate and Transfer (LROT) Basis.

GOVERNMENT OF MAHARASHTRA
WATER RESOURCES DEPARTMENT
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1) Preamble:

Hydroelectric power generation has many well recognised advantages. It is environmentally clean and renewable energy source with high degree of flexibility and reliability. In the overall economic interests of the State and the Country, hydro potential has to be optimally harnessed and operated efficiently by constant maintenance, renovation and modernisation.

Normally, the life of the civil structure, of the hydroelectric project is about 100 years but the normative life of the hydro-mechanical and electro-mechanical equipment is 35 years. With aging, the performance of the plant declines due to wear and tear of its various parts. Over a period of time, maintenance becomes costly and difficult due to non-availability of spares. In a fast-changing technological environment, control protection system comprising of electronic components and operating software become obsolete in a period of 10 to 12 years. This leads to frequent unplanned breakdowns and reduction in efficiency & reliability.

Renovation, Modernisation, Uprating & Life Extension (RMU&LE) of old hydro-electric plants has been accorded high priority by the Government of India as it is considered as a faster and cheaper option of capacity addition in comparison to installing new units, as critical issues like land acquisition, forest clearance or R & R, geological surprises, new evacuation arrangements are not involved. It improves the operational reliability and efficiency. It also extends the plant life by 25 years. In implementation of RMU&LE program, risk of time overrun is very limited. Thus, there exists encouraging environment for the PPP in implementation of RMU&LE program of the hydropower projects.

2) Status of Hydroelectric Projects in the State:

In the state of Maharashtra, the hydroelectric projects have been constructed by the Water Resources Department(WRD). After commissioning, these projects were handed over to then Maharashtra State Electricity Board (MSEB) for operation and maintenance. Now, post trifurcation of MSEB, these projects are being operated and maintained by the State owned, Maharashtra State Power Generation Company Limited (MAHAGENCo). Presently, 25 projects of total installed capacity of 2578.95 MW, which were constructed by WRD and now owned by the Irrigation Development Corporations (IDCs) are being operated by

MAHAGENCo. In addition to 25 hydroelectric projects that are presently operated by MAHAGENCo, there exist 6 more projects of 9.575 MW capacity, which are constructed and presently being operated by the WRD. The details of these projects are enclosed as Annexures- I & II. Out of 25 hydro electric projects being operated by MAHAGENCo, 10 projects of 622MW installed capacity as per Annexure-III have completed its normative useful life and another 4 projects of 37 MW installed capacity as per Annexure-IV will follow suit.

3) Relevant Legal Provisions:

a) Government of Maharashtra, through various enactments has constituted five Irrigation Development Corporations (IDC) in the State viz.

- Maharashtra Krishna Valley Development Corporation; (MAHARASHTRA ACT NO. XV of 1996).
- Vidarbha Irrigation Development Corporation; (MAHARASHTRA ACT NO. XXVI of 1997).
- Godavari Marathwada Irrigation Development Corporation; (MAHARASHTRA ACT NO. XXIII of 1998).
- Tapi Irrigation Development Corporation; (MAHARASHTRA ACT NO. IV of 1998).
- Konkan Irrigation Development Corporation; (MAHARASHTRA ACT NO. III of 1998).

As per the provisions in Section 15 of the respective IDC Acts, all the projects and assets including hydroelectric projects, situated in the area of jurisdiction of these IDCs, earlier vested with the State Government have been transferred to the respective IDCs.

b) Section 18 of these IDC Acts empowers the respective IDC to plan, investigate, design, construct and manage, promote and operate schemes for the generation of hydroelectric projects. These IDCs are also empowered to invite bids/offers for the purpose of all the activities of the corporations, promote participation of any person or body for designing and management of hydroelectric projects.

c) Electricity Act (EA), 2003 has delicensed the generation of electricity. Section 7 of the Act provides that any generating company may establish, operate and maintain a generating station without obtaining a license under this Act, if it complies with the technical standards relating to connectivity with the grid referred to in clause (b) of the Section 73 of the Act.

Thus respective IDCs by virtue of statutory provisions, being the owner of the hydroelectric projects in their jurisdiction have right of harnessing the natural resources at these sites for generation of hydro-electricity and earn revenue from it. Also IDCs can carry out RMU&LE works and operate these hydropower plants.

4) Past Action :

The petition was filed with the MERC for guidance regarding the transfer of Veer HEP back to the Water Resources Department for RMU. The Commission has mentioned in its order dated 14.12.2009 that the ownership of the said project belongs to Water Resources Department, hence Water Resources Department (WRD) should take a decision in this regard.

5) Need for the Policy & way forward :

By undertaking timely RMU&LE works, the existing generating plants can continue to operate for extended period of 25 years with improved reliability and availability. However in absence of any policy guidelines, the RMU&LE works have not been streamlined in the State. Therefore the Government of Maharashtra, Water Resources Department (GOMWRD) realised the need for policy intervention.

GOMWRD, constituted the Committee of experts to formulate the comprehensive draft of the policy document, for implementation of RMU&LE activities through Public Private Partnership (PPP). The Committee, after extensive consultation with the stakeholders and the experts in the field submitted a comprehensive draft policy document to the State Government.

Independent Hydropower Projects (IPPs), in which water is utilised only for power generation and the projects are useful for stability & management of the grid and therefore considering the strategic importance of these projects, MAHAGENCo can carry out RMU&LE works of these IPPs. Further, MAHAGENCo has communicated that RMU&LE works of IPPs will be carried out by them. Accordingly MAHAGENCO will carry out RMU&LE works of 6 IPPs of 561.50 MW as listed in Annexure- III under category- I

Considering the above-mentioned background, legislative intents of the various enactments mentioned in clause 3 above and the Report of the Committee, Government of Maharashtra Water Resources Department with concurrence of State Cabinet meeting dt. 30.07.2024 is pleased to declare this policy for Renovation, Modernisation, Uprating & Life Extension of over lived hydroelectric projects on Lease, Renovate, Operate & Transfer (LROT) basis.

6) Objectives of the Policy:

The State Government intends to achieve following objectives through this Policy:

a) Life Extension (LE) of over lived hydroelectric power plants by about 25 years, beyond its normative life.

b) Along with the life extension, improving the performance of over lived hydroelectric power plants in terms of efficiency, output, availability & reliability by resorting to modernisation with the state-of-art technology.

c) Uprating the station capacity, wherever feasible from techno-economic and hydrological point of view.

d) Converting existing base load stations to peaking stations for the benefit of the electricity grid, wherever feasible without adversely affecting the other planned consumptive water usages.

e) Reducing the maintenance requirements and ensuring ease of operation and safety.

f) Optimum utilisation of land available with WRD at hydroelectric plants and existing evacuation infrastructure by promotion of co-located hydro-solar hybrid power plant.

g) Accelerating the RMU&LE activities of the existing hydro-power plants through private sector participation.

h) Protection of overall interest of consumers by timely completion of the RMU&LE works without cost over-run and minimum loss of generation.

i) Generation of reasonable revenue for IDCs for sustenance of the infrastructure created for harnessing the natural resources.

j) To lay down the comprehensive framework for effective implementation of the policy.

7) Scope:

The provisions in this policy are applicable to all the hydroelectric projects in the State developed by the WRD, IDCs, and by developer under privatisation policies of the State including the projects handed over to MAHAGENCO for operation & maintenance.

PART- A: IMPLEMENTATION FRAMEWORK

8) Identification of Projects / Units Requiring RMU&LE:

RMU&LE program needs to be taken up timely to prevent further deterioration in operation of generating units which may lead to their premature retiring. Identification of plants requiring renovation and modernisation need to be done well in advance as there are several essentialities to be fulfilled which may take considerable time before commencement of the actual execution of works. The projects requiring RMU&LE will be primarily identified not only on the basis of its operating hours but on the basis of its performance record and parameters such as:

- Reduction in generation due to frequent breakdowns and reduction in efficiency;
- Reduction in plant availability due to frequent unplanned breakdowns;
- Temperature rise, vibrations etc.;
- Uneconomical operations due to increase in O & M Cost;

- Obsolescence of equipment and non-availability of spares;

The performance of all the projects shall be critically reviewed initially after 10 & 20 years of operations and every 5 years after 20 years of operation. The performance data shall be documented in the standard format prescribed in the "Guidelines for Renovation & Modernisation of Hydro Power Stations" issued by the CEA (hereinafter referred to as "CEA R&M Guidelines"), as amended from time to time. The projects based on the past performance data and the criteria listed above shall be considered for Residual Life Assessment (RLA) study. The Chief Engineer (Electrical), Hydro Projects, Mumbai or any other competent authority, as may be identified by the GoMWRD will be responsible for identification of projects for RMU&LE and timely carrying out RLA study.

9) Residual Life Assessment (RLA) Study:

Systematic RLA study of the primarily identified projects shall be conducted as a mandatory technical requirement to assess the health and residual life of every component of the hydro generating unit and to firm up the scope of RMU&LE plan.

RLA study, in order to avoid conflict of interests shall be conducted through an independent institute or competent consultant who will not be involved subsequently in the execution of RMU&LE works, directly or indirectly. This specific provision shall be made in the bid document.

RLA study and its report shall be on the basis of inspections, diagnostic tests and checks specified in the CEA R & M Guidelines. RLA study shall identify and address the problems due to generic defects, design deficiency if any, aging, obsolescence of equipment/components, non-availability of spares, low efficiency of generating units and safety requirements.

In RLA study, the hydrology shall be reviewed and the hydropower potential shall be reaffirmed, taking due cognizance of any change in hydrology over a period. Any scope for uprating based on the availability of additional water if any shall also be evaluated.

RLA study, in addition to electromechanical components, must also give due attention to hydro mechanical and civil components. Erosion damages of civil works especially in the intake structures water conductor system and tail race channels require special attention. Water leakages from the gates and intake structure shall also be given due consideration.

RLA Report should specify the envisaged RMU&LE plan, considering the life extension of 25 years and techno-economic feasibility of uprating. The possibility of converting existing baseload station to peaking station may also be considered.

Considering the fact that the control protection and communication system comprising of electronic hardware and software, become obsolete in a period of 10 to 12 years, provision for two cycles of renovation and modernisation of electronic control system will be made for achieving reliability and higher yield. The scope of the RMU&LE work shall be clearly defined, to avoid cropping up of the extra works beyond the envisaged scope at later stage resulting into cost and time overrun.

Provision for discharge and net head measurement facility along with its synchronisation with SCADA system and data logging system shall be provided. Further, the RLA Report should clearly indicate which components / equipment are to be refurbished and which need complete replacement. Report shall also cover the prioritization of R&M activities. The works having shorter gestation period but having immediate benefits in terms of improvement of availability, increase in generation etc. will be assigned higher priority.

RLA report shall be approved by the CE (Electrical) in consultation with the concerned Chief Engineer (civil) and Superintending Engineer, Koyna Design Circle, Pune within one month from the receipt of such report with or without any modifications. .

10) Preparation of the Detailed Project Report (DPR):

Due attention must be given while preparing DPR to avoid further complications at tariff determination process. The DPR should be bankable and shall include but not limited to following essential provisions.

a) Complete scope of the envisaged RMU&LE works consistent with the approved RLA report;

b) Hydrology details duly considering the change in hydrology or water release pattern, if any;

c) History of Project wise /unit wise past performance, trajectory of operation of the generating plant and project specific operating criteria / conditions i.e. whether the power station is expected to be operated as per the irrigation schedule or as per the instructions of the Maharashtra State Load Despatch Centre (MSLDC).

d) Working table for 75% dependable year and Design Energy (DE);

e) Detailed cost estimates, on the basis of Guidelines issued by Alternate Hydro Energy Centre, Indian Institute of Technology Roorkee, shall be prepared. The cost estimates shall be realistic to the extent possible and should be based on current market rates / budgetary offers of the supplying agencies. Capital cost shall cover the costs of all civil, electro-mechanical and hydro-mechanical works, cost of RLA study including testing,

pre-development charges, financial charges, interest during construction, all applicable taxes, expenses towards foreign exchange component if any, freights, insurance, erection, testing and commissioning, project management, contingencies, overheads etc. It should also account for mandatory payments to be made to the WRD including all applicable taxes.

f) Cost benefit analysis, computation of the cost of generation and likely levelized tariff as per prevailing tariff regulations notified by the Commission.

g) Implementation schedule of RMU&LE works will be planned with minimum generation loss. In projects having more than one unit, generation will be planned concurrently with the works to the extent possible.

h) As the RMU&LE activities are proposed to be taken up through MAHAGENCo/ PPP, the administrative approval of the State Government to the DPR will not be required. However, CE (Electrical) shall certify the correctness of the provisions in the DPR viz. scope of RMU&LE works, overall cost abstract, working table and the design generation etc. The concerned Chief Engineer (Civil) shall certify the water availability, water release schedule and cost abstract of the civil works. The successful bidder may prepare its own DPR consistent with its envisaged RMU&LE plan and costing.

11. Implementation Policy:

RMU&LE works pertaining to over lived hydroelectric projects are necessary and are categorised as follows -

i) Category I - Independent Hydropower Projects (IPPs) :-

Out of twenty five projects owned & constructed by WRD and leased out to MAHAGENCo as listed in Annexure- I, nine Independent Hydropower Projects (IPP) of 2411.5 MW capacity, in which water is utilised only for power generation and the projects are useful for stability & management of the grid. Considering the strategic importance of these projects, MAHAGENCo shall carry out RMU&LE works of these IPPs after expiration of their 35 years of normative life as per the requirement with prior consent from WRD and will continue to run and maintain these IPPs further on terms & conditions of this policy document in the form of Lease Agreement before carrying out R&M works. MAHAGENCo will carry out the RMU&LE works of the IPP at their own cost. MAHAGENCo shall pay annual lease charges, intake maintenance charges & 13% free power etc. as per Part- D of the policy to concerned IDC.

Category II - Irrigation Based Power Projects

a) Remaining 16 hydroelectric projects of 167.45 MW capacity listed in Annexure-I & six hydroelectric projects of 9.575 MW capacity listed in Annexure II in which power generation is incidental to irrigation and/or water supply releases will be carried out through Lease, Renovate, Operate & Transfer (LROT) basis. Though hydroelectric projects listed in Annexure II has not completed their normative life of 35 years, but requires repairs & maintenance for some hydro power plant component, hence these projects are proposed for allotment to a Generating Company, following a transparent two stage bidding process through Lease, Renovate, Operate & Transfer (LROT) basis.

b) Further, GOMWRD/IDC shall convey to MAHAGENCO, in writing the status of bidding process and the probable date of handing over the project to the successful bidder for RMU&LE work on LROT basis for Category II projects, at least four months in advance, for enabling them to make administrative arrangements of the operating staff.

c) **Standard Bidding Documents and Model Lease Agreement:** In order to have uniformity amongst the various IDCs, GOMWRD will standardise the bidding document and lease agreement. Bidding document shall provide history of operation of the generating units and project specific operating criteria / conditions i.e. whether the power station is expected to be operated as per the irrigation schedule or the grid requirements.

d) The ownership of the projects will vest with concerned IDC after handing over of hydro projects by MAHAGENCo to WRD. On behalf of IDC, the bidding process shall be carried out by Chief Engineer (Electrical), Hydro projects, Mumbai.

e) Promoter shall pay annual lease charges, intake maintenance charges & 13% free power etc. as per Part- D of the policy to concerned IDC.

12) Selection of the Generating Company for Category II projects:

Project shall be allotted to a Generating Company, following a transparent two stage bidding process. MAHAGENCO may also participate in this bidding process. In the first stage, the bidders will be shortlisted on the basis of assessment of their financial and technical strengths. In the second stage, the financial bids shall be called from the pre-qualified bidders. The bidder who offers the highest Upfront Premium (UP) over and above the Threshold Premium (TP) fixed for the bidding will be selected as a successful bidder.

Threshold Premium shall be Rs. 2 lakh per MW of installed capacity of hydroelectric project or the unrecovered allowable depreciation of originally admitted cost with

additional capitalisation if any, whichever is maximum. The TP so fixed shall be the part of the capital cost.

13) Implementation Schedule:

The implementation schedule for various tasks shall be as follows:

a) Letter of Allotment (LoA) shall be issued to the successful bidder within 10 (ten) calendar days from the opening of the financial bids.

b) The successful bidder or the Special Purpose Vehicle (SPV) proposed by the successful bidder as per the provisions in the bidding document shall submit within 15 (fifteen) days from the date of LOA the Performance Security (PS) in the form of irrevocable Bank Guarantee (BG). Value of the PS shall be 5 % of the estimated cost of RMU&LE work. This period for the submission of the PS shall not be extended in any case and if the successful bidder fails to submit it within stipulated period, LOA issued shall stand cancelled and Earnest Money Deposit (EMD) deposited along with the bid shall be forfeited. Under such circumstances, LoA shall be issued to bidder who has offered next higher UP.

c) The successful bidder shall further make the payments of the TP & UP within one month from the date of LoA. In no case the time limit prescribed for the payment of the TP & UP shall be extended. If the successful bidder fails to make the payment of TP & UP within stipulated period, LoA issued shall stand cancelled and EMD as well as PS shall be forfeited. Under such circumstances LoA shall be issued to bidder who has offered next highest UP.

d) After the submission of the PS and payment of UP & TP by the successful bidder, the EMD submitted by other bidders shall be released within 15 (Fifteen) calendar days.

e) The Generating Company or the SPV, who shall also be recognised as Generating Company shall execute the lease agreement with CE (Civil) of concerned IDC on the Non-Judicial Stamp Paper of requisite value, within 30 (thirty) days from the date of issue of LoA. Lease agreement shall be registered within next 10 days. The cost of stamp duty and registration shall be borne by the Generating Company.

f) IDC shall hand over the project site to the Generating Company within 10 (ten) days after completion of the above said activities. The IDC shall handover the project in 'AS IS WHERE IS BASIS' along with all the spares, tools and plants, package sheds, drawings etc.

g) The Generating Company shall simultaneously arrange for any other required formalities such as preparation of its own DPR, obtaining necessary clearances, financial closure, tariff determination by the Commission, signing of the Energy Purchase Agreement (EPA) etc.

h) The project shall be re-commissioned after carrying out necessary RMU&LE works within the stipulated time. Time limit for the execution of the RMU&LE works shall be fixed on the basis of nature and the extent of work. However many a times, during the execution after dismantling of the machines, additional works which were not considered in RLA study, may crop up, requiring reverse engineering. Under such circumstances suitable time extension shall be given without any cost implications. CE (civil) in consultation with CE (Electrical), Hydro Projects, Mumbai will be the competent authority for granting such extensions.

i) The cost of disposal of scrap shall be borne by the Generating Company at the same time scrap and replaced components/equipment shall be the property of Generating Company.

j) During execution the progress of the work shall be reviewed with respect to the milestones set in the lease agreement. In case the Generating Company fails to achieve expected progress, it will be entitled to pay the liquidated damages as prescribed in Lease agreement.

14) Term of Lease:

The term of lease shall be of 25 years from Commercial Operation Date(COD). At the end of the LROT period, absolute possession of the project along with the land switchyard and allied equipment and spares automatically stand transferred to IDC free of cost.

PART- B: WATER AVAILABILITY FOR GENERATION

15) Water Availability for Generation:

a) In case of hydroelectric projects developed on irrigation projects, the hydropower generation is incidental to irrigation/domestic/industrial water supply (consumptive uses). The water releases for such hydroelectric projects shall be strictly as per demand of the consumptive uses and the Generating Company shall plan the schedule for generation of energy in accordance with such water release schedule. Further IDC reserves the right to decide the water release schedule and modify it from time to time, as per the requirement of the consumptive uses. Such schedule and changes therein will be communicated to the generating company preferably two days in advance.

b) IDC, both during fair weather season and monsoon surplus releases, shall endeavour to release maximum volume of water from the dam in such a way that it can be utilised for generation of electricity. However the decision of the IDC, in this regard shall be final, binding and conclusive. No claim of compensation on these grounds shall be entertained.

16) Reduction in Generation Due to Less Availability of Water & Consequential Provisions:

In unforeseen events in which actual generation is reduced below 75% of the Design Energy (DE), due to less availability of water shall be governed by the following provisions.

Sr. No.	Reason for Less Availability of Water for Generation.	Consequential Provisions
1	Less rainfall resulting into less inflow into the dam and consequential reduction in the water release for power generation	Generating Company shall not be entitled for any compensation.
2	Water level in the dam is restricted temporarily for repairs of the dam or from dam safety point of view and or any other reasons beyond the control of the IDC, resulting into reduction in generation, by more than 25% of the DE.	This situation shall be treated as a Force Majeure Event. The IDC shall give written intimation of occurrence of such Force Majeure event to the Generating Company. The term of the lease shall be extended by a period for which the Force Majeure event exist. However, Generating Company shall not be entitled for any compensation.
3	Additional diversion of water from the reservoir for domestic / industrial / lift irrigation after signing of the lease agreement, without power generation, resulting into reduction in generation, by more than 25% of the DE due to such diversion of water.	This event shall be treated as IDC event of default and the Generating Company shall have the right to terminate the lease agreement, following the procedure specified in the lease agreement. IDC on receipt of such notice of termination shall scrutinise the reasons for less generation and submit the proposal to Secretary (CAD) for approval. After approval of Government if the reduction in generation is more than 25% of the DE and is due to additional diversion of water from the reservoir, without power generation, after signing of the lease agreement, IDC shall take over the project and relieve the Generating Company from the contractual obligations. In such circumstances,

Sr. No.	Reason for Less Availability of Water for Generation.	Consequential Provisions
		IDC shall return the PS to the Generating Company. Further, the Generating Company shall be compensated with residual cost of the project, as evaluated by the IDC, on the basis of facts that are mentioned in the lease agreement. The decision regarding residual cost of IDC is final.

PART- C: GENERATION & SALE OF ENERGY

17) Generation:

As per the provisions in EA 2003, the Generating Company during the term of the lease shall be entitled to operate and maintain the power plant without obtaining any licence provided the technical standards related to connectivity with the grid referred to in sub-Section (b) of Section 73, provisions in Section 10, other relevant provisions in the EA 2003 and prevalent regulations / orders of the Commission are followed.

18) Scheduling & Despatch Principles for Electricity:

As per the provisions in the Section 33 of the EA 2003, Generating Company shall comply with the directions of the Maharashtra State Load Despatch Centre (MSLDC). As per the prevailing regulations of the Commission, all RE projects are presently treated as 'Must Run' projects and shall not be subjected to 'Merit Order Despatch' principle, however provisions in the Regulations of the Commission, issued from time to time, shall be applicable.

19) Grid Interconnection and Evacuation Arrangements:

Grid interconnection and evacuation arrangement shall be governed by the prevailing Grid Code, Regulations and the Orders of the Commission and the relevant provisions in the Energy Purchase Agreements to be signed by the Generating Company with the distribution licensee / Purchaser.

20) Wheeling and Transmission:

Applicability of wheeling and transmission charges and losses shall be governed by the prevailing Regulations and Orders of the Commission.

21) Banking:

Banking facility shall be regulated by the provisions in the prevailing Regulations / Orders of the Commission.

22) Sale of Power:

The sale of electricity shall also be guided by the provisions in the prevalent RE policy and Energy policy of the State. The Government of Maharashtra, in its' Non-Conventional Energy Generation Policy -2020, has set the target of 380 MW to be achieved through SHPs by 2025 and has assured that it will purchase power from SHPs directly, through Energy Purchase Agreements, at the rate to be decided by the Commission to achieve this target.

Further, the hydro generating plants covered under this RMU&LE policy, may result in comparatively lower tariff than that of new projects. Hence, it would not be prudent to allow its benefits to any person other than MSEDCL considering the fact that during the earlier period of such plants, MSEDCL has partially serviced its cost through lease charges. Hence, the first right of refusal of energy generated from hydroelectric plants covered under this policy shall vest with the MSEDCL, the State-owned distribution licensee. Provided further that MSEDCL shall provide the refusal in 30 (thirty) days from the date of receipt of the request beyond which it shall be treated as deemed refusal. The tariff for sale of power to distribution licensee shall be determined by the Commission. The Generating Company, therefore will be required to approach the Commission, for determination of the tariff with necessary petition under section 62 of the EA, 2003 and tariff regulations notified by the Commission.

PART- D: Mandatory Payments to IDC

23) In addition to the payment of the Threshold Premium and the Upfront Premium, the Generating Company will have to make the following mandatory payments to the respective IDC:

a) Lease Charges: The lease charges for the transferred asset of the hydroelectric project shall be at the rate of Rs.4.5 Lakhs per annum per MW of the installed capacity of the hydroelectric project. These annual charges are for FY 2022-23. In case the generating company intends to develop co-located hydro-solar hybrid project, the necessary additional land, if available will be provided to the generating company. Else the IDC may give the permission to install floating PV solar panels at appropriate locations in the reservoir, if feasible. In such cases, additional land lease charges as provided in clause 25 (g) shall be applicable.

b) Intake Maintenance Charges: The Generating Company shall pay the intake maintenance charges to the IDC. In case of Category-I projects, the applicable intake maintenance charges shall be Rs. 0.50 per kWh. And for Category-II projects applicable intake maintenance charges shall be Rs. 0.10 per kWh. These annual charges are for FY

2022-23. But, if the Generating Company maintains the intake structure at its own cost, in such case they need not to pay any intake maintenance charges to IDC.

c) The above rates of lease charges and intake maintenance charges shall be increased in every subsequent year by 5% compounding and applicable from the first year of commercial generation.

d) The Generating Company shall pay charges to the IDC as per rate decided by MERC for 13% free power of net energy exported from the hydroelectric project to the grid as per National Hydro Policy 2008.

e) GST or any other tax applicable under reverse charge mechanism for such payments shall be borne by the Generating Company.

f) Intake maintenance charges shall be invoiced quarterly at the end of each quarter and lease charges shall be invoiced at the beginning of every financial year. All these charges will have to be settled within 30 days from the date of invoice, along with the applicable taxes thereon. Thereafter the interest at prevailing Marginal Cost of Funds based Lending Rate (MCLR) plus 2% (Two percent) per annum on delayed payment for delayed period shall be made applicable.

PART- E: Co-Located Hydro-Solar Hybrid Projects

24) In case the Generating Company opt to develop co-located hydro-solar hybrid project, along with the RMU&LE of the existing hydropower plant under this policy, it will be permitted to tap the solar potential of the land and/or roof top of the project handed over to it, following the provisions in clause 25 below.

The IDC may also provide any additional land required for solar component, if available, on lease basis. IDC, after ascertaining technical feasibility on case-to-case basis, may also permit the solar installation on downstream slope of the dam or on the submergence of the dam for installation of floating solar panels, subject to all necessary statutory clearances.

25) In case the Generating Company opt to develop hydro-solar hybrid project, as per the provisions in clause 24 above, following additional provisions shall also be applicable.

a) The Generating Company, to which hydroelectric project is allotted by bidding, after site inspection may submit the Techno Economic Feasibility Report for the co-located solar project to CE (Electrical), Hydro Pojects, Mumbai along with the additional land requirement if any and the necessary processing fees. The processing fee shall be Rs. 1 Lac per MW or part thereof, of solar installation considering base year 2022-23 and same shall increase in every subsequent year by 5% compounding.

b) On scrutiny of such proposal and subject to availability of additional land, the proposal will be approved, and the separate Letter of Permission (LOP) shall be issued. The CE (Electrical), Hydro Pojects, Mumbai shall be the competent authority for this.

c) Generating Company shall be required to sign supplementary agreement with IDC for the solar project.

d) The term of the lease shall be coterminous with that of the hydro-electric project.

e) Generation meters shall be provided to each source of Renewable Energy as per CEA specifications.

f) The provisions in the prevalent RE Policy of the State Government and prevailing Regulations and Orders of the Commission shall be applicable.

g) The Generating Company will pay to the IDC, the annual additional lease charges at the following rates:

i. For land/roof top installed solar panels: Rs. 0.10 per kWh of net energy exported, from the solar installation, for FY 2022-23 and same shall be increased in every subsequent financial year by 5% compounding.

ii. For floating solar panels: Rs. 0.05 per kWh of net energy exported, from the solar installation, for FY 2022-23 and same shall be increased in every subsequent financial year by 5% compounding.

h) Generating Company may use the power produced from co-located solar power plants, under this policy, for (a) captive purpose; (b) sale to third party through open access; (c) sale to any distribution licensee as per the provisions of the Regulations and Orders of the Commission.

i) At the end of the lease period, the absolute ownership of the hydro-solar project, along with the land shall automatically stands transferred to IDC free of cost.

PART- F: GENERAL PROVISIONS

26) Appointment of Nodal officer:

GoMWRD / IDC shall appoint the nodal officer who will facilitate the activities such as registration of lease agreement, handing over of the project, obtaining necessary clearances, grid connectivity and PPA with the MSEDCL etc.

27) GOMWRD/IDC shall endeavour to observe the time bound commitments made in this policy.

28) Inspection of Project:

In addition to the statutory inspection by Factory Inspector and Electrical Inspector, the GOMWRD or the IDC, through its' engineers or any authorised Panel of Experts, before and after the monsoon, every year shall inspect the power project from safety point of view. The Generating Company shall render all necessary cooperation for such inspection(s). The inspection team shall submit inspection reports to CE (Civil) of respective IDC and to CE (Electrical) after completion of inspection.

The Generating Company shall maintain the plant performance data in the standard format prescribed in the CEA, R&M Guidelines and such data shall be made available at the time of inspection.

29) The Generating Company shall not use the land handed over to it for any other purpose other than the purpose, envisaged in this policy without prior permission of the IDC.

30) Taxes and Duties:

Generating Company shall pay all the taxes, duties & other levies made applicable from time to time to the respective departments of the Central, State and Local Governments unless specifically exempted. It shall be presumed that the Generating Company has considered the relevant statutory provisions at the time of bidding and signing the lease agreement.

31) Transfer of Allotment:

If the Generating Company, as per the prevailing laws, intends to transfer its rights in the hydroelectric project or hydro-solar hybrid project, as the case may be, it shall be permitted to do so, only after prior approval of the IDC. IDC may give such approval provided,

a) Financial institution has consented such transfer.

b) Proposed Generating Company agrees to all the terms & conditions of the lease agreement signed by the original Generating Company.

c) Generating Company deposits the transfer fees of Rs. 2 Lacs/MW of installation of Hydro or Hydro-Solar hybrid project considering the base year as 2022-23 and same shall increase in every subsequent year by 5% compounding.

d) In case of hydro-solar hybrid project the entire ownership (both hydro generating plant and solar installations) will have to be transferred.

32) Powers to Resolve Difficulties:

In the event of dispute in respect of interpretation of any of the provisions or giving effect to any of the provisions in this policy, the decision of the Secretary (CAD), GOMWRD shall be final, conclusive and binding;

Provided that in all such matters, reasonable opportunity will be given to the affected party, to be heard before the final decision.

33) Period of Enforcement:

This policy will remain in force unless withdrawn, modified or superseded by the Government. The Government will undertake a review of this Policy as and when required.

PART- G: INCENTIVES

34) If actual generation is less than 75% of the Design Energy (DE), due to less availability of water, then intake maintenance charges payable to the IDC, for that year shall not be applicable.

35) If the Generating Company commissions the project, prior to scheduled date of commissioning, it will be exempted from payment of intake maintenance charges to an extent of energy exported to the grid before scheduled date of commissioning.

36) IDC will allow to use the approach road to the powerhouse and site if it is in possession of IDC. However, the Generating Company shall carry out the maintenance of the approach road to the powerhouse.

37) IDC will provide residential quarters of suitable type, if available near the project site, on "AS IS WHERE IS" basis for the operating staff of the powerhouse, during development and operation period. However, the Generating Company shall carry out the maintenance of the same at its own cost. The rent per annum for such quarters shall be 10% of its depreciated value, as calculated by IDC. the Generating Company at the end of lease period shall transfer these quarters to IDC on "AS IS WHERE IS" basis.

38) If the residential quarters are not available with IDC for the operating staff, IDC shall make available the piece(s) of land, if available, to the Generating Company for the construction of the residential quarters for the operating staff. Generating company shall construct the buildings at its own cost and the same shall stand transferred to IDC free of cost

at the expiry of the term of the lease agreement. The rent of such land shall deem to be included in the lease charges payable by the Generating Company under clause 23 (a).

This Policy supersedes the G.R. No.जविप्र २०२१/प्र.क्र. १०५/जवि, दि.१६.११.२०२१. This Government Resolution is available on the official website of Government of Maharashtra, www.maharashtra.gov.in and its computer code is 202408211736464727 This Government Resolution is digitally signed.

By order and in the name of the Governor of Maharashtra,

SANJAY MADHUKAR BELSARE

Digitally signed by SANJAY MADHUKAR BELSARE
DN: c=IN, o=GOVERNMENT OF MAHARASHTRA, ou=WATER RESOURCES DEPARTMENT, 2.5.4.20=544e07f06fbab100dc2bfe33db79fc14350d78d6c16f8feab484d842c496717d, postalCode=400032, st=Maharashtra, serialNumber=B619FF7825128B0AC0C1D94202F9F411ECE90F19D72AB83FAF5A9DDBDFC515DE, cn=SANJAY MADHUKAR BELSARE
Date: 2024.08.21 18:05:57 +05'30'

(Dr. Sanjay Belsare)
Secretary (CAD)
WRD, Mantralaya, Mumbai.

Encl.: Appendix I & Annexure I to IV.

Copy to :

1. The Principal Secretary to Hon. Governor, Maharashtra State, Mantralaya, Mumbai
2. The Principal Secretary to Hon. Chief Minister, Maharashtra State, Mantralaya, Mumbai
3. The Principal Secretary to Hon. Dy. Chief Minister (Water Resources & CAD), Maharashtra State, Mantralaya, Mumbai
4. The Principal Secretary to Hon. Dy. Chief Minister (Planning & Finance), Maharashtra State, Mantralaya, Mumbai
5. The Leader of Opposition,(Legislative Assembly/ Council), Maharashtra State, Vidhan Bhavan, Mumbai
6. All members of Legislative Assembly & Council , Maharashtra State, Vidhan Bhavan, Mumbai
7. The Principal Secretary to Hon. All Ministers, Maharashtra State, Mantralaya, Mumbai
8. The Principal Secretary to Hon. All State Ministers, Maharashtra State, Mantralaya, Mumbai
9. The Chief Secretary, Maharashtra State, Mantralaya, Mumbai
10. The Additional Chief Secretary (Finance), Finance Department, Mantralaya, Mumbai.
11. The Additional Chief Secretary,Water Resources Department, Mantralaya, Mumbai.
12. The Principal Secretary (Planning), Planning Department, Mantralaya, Mumbai
13. The Principal Secretary (Energy), I.E.& L.Department,Mantralaya, Mumbai.
14. The Principal Secretary (Industries), I.E.& L.Department, Mantralaya, Mumbai.
15. The Principal Secretary (RLA), Law & Judiciary Department, Mantralaya, Mumbai
16. The Secretary (CAD),Water Resources Department, Mantralaya, Mumbai.
17. The Secretary (PC), Water Resources Department, Mantralaya, Mumbai.
18. The Chairman, Maharashtra Electricity Regulatory Commission, Mumbai
19. The Managing Director, MSEB Holding Company Ltd. , Prakashghad, Mumbai
20. The Managing Director, MSTCL, Prakashghad, Bandra, Mumbai.
21. The Managing Director, MSEDCL Prakashghad, Mumbai .
22. The Managing Director, MSPGCL, Prakashghad, Mumbai
23. Executive Directors and Chief Engineers of all Irrigation Development Corporations

24. All CE & Joint Secretaries, Water Resources Department, Mantralaya, Mumbai
25. Chief Engineer (Electrical), Hydro Projects, Mumbai
26. All Regional Chief Engineers /Superintending Engineers of Water Resources Department.
27. Directorate General of Information & Public Relations, Maharashtra State, Mantralaya, Mumbai (2 copies)
28. HP Desk (for collection).

Appendix-I

Sr. No	Abbreviation	Full form of Abbreviation
1.	BOT	Built- Operate - Transfer
2.	CE (Civil)	Regional Chief Engineer
3.	CE (Electrical)	Chief Engineer, Electrical, Hydro Projects, Mumbai
4.	CEA	Central Electricity Authority
5.	COD	Commercial Operation Date
6.	DE	Design Energy
7.	EA 2003	Electricity Act 2003
8.	EMD	Earnest Money deposit
9.	GoM	Government of Maharashtra
10.	GoMDoE	Government of Maharashtra, Department of Energy
11.	GoMWRD	Government of Maharashtra, Water Resources Department
12.	HPDA	Hydro Power Development Agreement
13.	IDC	Irrigation Development Corporation of Maharashtra
14.	IDC Concerned	IDC having jurisdiction of the Hydro Project
15.	IPP	Independent Hydro Power Project
16.	LoA	Letter of Allotment.
17.	LoAS	Letter of Authorization.
18.	LoP	Letter of Permission.
19.	MAHAGENCo	Maharashtra State Power Generating Company
20.	MCLR	Marginal Cost of Funds based Lending Rate
21.	MERC	Maharashtra Electricity Regulatory Commission
22.	MSLDC	Maharashtra State Load Dispatch Centre

Sr. No	**Abbreviation**	**Full form of Abbreviation**
23.	O &M	Operation and Maintenance
24.	PPA	Power Purchase Agreement
25.	PPP	Public Private Partnership
26.	RE	Renewable Energy
27.	R & R	Relief and Rehabilitation
28.	RMU & LE	Renovation, Modernization, Uprating and Life Extension
29.	SPV	Special Purpose Vehicle
30.	TP	Threshold premium
31.	UP	Upfront premium

Annexure-I

List of Hydro Projects Commissioned by WRD and handed over for O&M on lease basis to MAHAGENCO

Sr. No.	Name of Hydro Electric Project	Installed Capacity (MW)	Designed Generation (MUs)	Date of Commissioning	Category
1.	Koyna Stage - I&II (4x70 + 4x80MW)	600	700	1) 16.05.62 2) 02.08.62 3) 28.01.63 4) 28.02.63 5) 30.06.67 6) 28.11.66 7) 22.06.66 8) 23.06.66	Category-I
2.	Koyna Stage -III (4x80MW)	320	560	1) 06.07.75 2) 11.01.76 3) 08.05.77 4) 02.10.78	Category-I
3.	Vaitarna (1 x 60 MW)	60	144	26.06.76	Category-I
4.	Koyna Dam foot Power House-I (2 x 20 MW)	40	146	1) 03.10.80 2) 16.03.81	Category-I
5.	Tillari (1 x 60 MW)	60	133	10.10.86	Category-I
6.	Bhira (2 x 40 MW)	80	75	1) 29.03.88 2) 13.09.87	Category-I
7.	Vaitarna Dam Toe (1 x 1.5 MW)	1.5	8	21.09.87	Category-I
8.	Koyna Stage -IV (4x250MW)	1000	1450	1) 20.06.99 2) 25.11.99 3) 04.03.00 4) 03.05.00	Category-I
9.	Ghatghar (2 x125 MW)	250	467	1) 09.04.08 2) 23.06.08	Category-I
	SUB TOTAL – I	2411.5 MW	3683		

10.	Yeldari (3 x 7.5 MW)	22.5	45	1) 16.06.68 2) 10.05.68 3) 20.03.68	Category-II
11.	Bhatghar (1 x 16 MW)	16	36	02.08.77	Category-II
12.	Paithan (1 x 12 MW)	12	21	01.11.84	Category-II
13.	Pawna (1 x 10 MW)	10	16	11.06.88	Category-II
14.	Khadakwasla HEP				
	1) Panshet (1 x 8 MW)	8	55	1) 31.03.91	Category-II
	2) Varasgaon (1 x 8 MW)	8		2) 21.08.91	Category-II
15.	Kanher (1 x 4 MW)	4	15	18.08.91	Category-II
16	Bhatsa (1 x 15 MW)	15	62	28.09.91	Category-II
17.	Dhom (2 x 1 MW)	2	11	1) 31.3.92 2) 13.3.92	Category-II
18.	Ujani (1 x 12 MW)	12	22	02.05.94	Category-II
19.	Manikdoh (1 x 6 MW)	6	18	22.11.95	Category-II
20.	Terwanmedhe (1 x 0.2 MW)	0.2	1	31.03.98	Category-II
21.	Surya RBC (1x0.75 MW)	0.75	5.60	04.06.98	Category-II
22.	Dimbhe (1 x 5 MW)	5	18	17.10.98	Category-II
23.	Surya (1 x 6 MW)	6	21	01.01.99	Category-II
24.	Warna (2 x 8 MW)	16	56	1) 16.09.99 2) 01.09.99	Category-II
25.	Dudhganga (2 x 12 MW)	24	57	1) 27.02.00 2) 31.03.00	Category-II
	SUB TOTAL-II	167.45 MW	459.6		
	Total I+II	**2578.95**	**4142.6**		

Note:- **Catogory I - Independent Power Projects.**

Catogory II - Irrigation Based Power Projects.

Annexure-II

List of Hydro Projects Commissioned & being Operated by WRD

Sr. No.	Name Of Hydro Electric Projects	Installed Capacity (MW)	Designed Generation (MUs)	Date of Commissioning	Category
1.	Yevateshwar 1 x 0.075	0.075	0.59	02.01.1998	Category-II
2.	Karanjwan 1x3	3	8.54	26.10.2001	Category-II
3.	Shahanur 1 x 0.75	0.75	2.68	11.02.2004	Category-II
4.	Dolwahal 2x1	2	5.56	i) 02.12.2007 ii) 21.12.2007	Category-II
5.	Majalgaon 3 x 0.75	2.25	8.74	i) 20.12.2007 ii) 17.01.2008 iii) 18.02.2008	Category-II
6.	Wan 1x1.50	1.50	4.20	20.12.2007	Category-II
	TOTAL	**9.575**	**30.31**		

Annexure-III

List of Hydro Power Projects due for R&M :-

Sr. No.	**Name of Hydro Electric Project**	**Installed Capacity (MW)**	**Date of Commissioning**	**Completion of 35 years Normative Life**	**Category**
1.	Koyna Stage -III (4x80MW)	320	1) 06.07.75 2) 11.01.76 3) 08.05.77 4) 02.10.78	July 2010 to October 2013	Category-I
2.	Vaitarna (1 x 60 MW)	60	26.06.1976	June 2011	Category-I
3.	Koyna Dam foot Power House-I (2 x 20 MW)	40	1) 03.10.80 2) 16.03.81	October 2015	Category-I
4.	Tillari (1 x 60 MW)	60	10.10.86	October 2021	Category-I
5.	Bhira (2 x 40 MW)	80	1) 29.03.88 2) 13.09.87	March 2023	Category-I
6.	Vaitarna D.T (1 x 1.5 MW)	1.5	21.09.87	September 2022	Category-I
	SUB TOTAL	**561.50 MW**			
7.	Yeldari (3 x 7.5 MW)	22.5	1) 16.06.68 2) 10.05.68 3) 20.03.68	June 2003	Category-II
8.	Bhatghar (1 x 16 MW)	16	02.08.77	August 2012	Category-II
9.	Paithan (1 x 12 MW)	12	01.11.84	January 2019	Category-II
10.	Pawna (1 x 10 MW)	10	11.06.88	June 2023	Category-II
	SUB TOTAL	**60.50 MW**			
	TOTAL CATEGORY-(I & II)	**622 MW**			

Annexure-IV

List of Hydro Projects outlived their Normative Life of 30 years & due for R&M in Next 5 years:-

Sr. No.	Name of Hydro Electric Project	Installed Capacity (MW)	Date of Commissioning	Completion of 35 years Normative Life	Category
1.	Khadakwasla				
	1) Panshet (1 x 8 MW)	08	31.03.91	March, 2026	Category-II
	2) Varasgaon (1 x 8 MW)	08	21.08.91	August, 2026	Category-II
2.	Kanher (1 x 4 MW)	04	18.08.91	August 2026	Category-II
3.	Bhatsa (1 x 15 MW)	15	28.09.91	September 2026	Category-II
4.	Dhom (2 x 1 MW)	02	1) 31.03.92 2) 13.03.92	March 2027	Category-II
	TOTAL	**37 MW**			